

# FISH & RICHARDSON P.C.

A

Frederick P. Fish  
1855-1930

W.K. Richardson  
1859-1951

225 Franklin Street  
Boston, Massachusetts  
02110-2804

Telephone  
617 542-5070

Facsimile  
617 542-8906

Web Site  
www.fr.com

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## Box Patent Application

Assistant Commissioner for Patents  
Washington, DC 20231

Presented for filing is a new original patent application of:

Applicant: PATRICK E. PATTERSON  
Title: DELIVERING ELECTRONIC CONTENT

Enclosed are the following papers, including those required to receive a filing date under 37 CFR §1.53(b):

	<u>Pages</u>
Specification	12
Claims	4
Abstract	1
Signed Declaration	To Be Filed At A Later Date
Drawings	11

Enclosures:

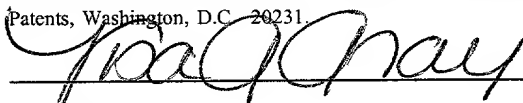
- Postcard.

This application is entitled to small entity status. A small entity statement will be filed at a later date.

"EXPRESS MAIL" Mailing Label Number **EM529183811US**

Date of Deposit **January 15, 1999**

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January 15, 1999

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Basic filing fee	380.00
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Fee for multiple dependent claims	0.00
Total filing fee:	\$ 446.00

A check for the filing fee is enclosed. Please apply any other required fees or any credits to deposit account 06-1050, referencing the attorney docket number shown above.

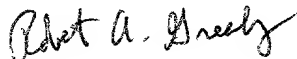
If this application is found to be incomplete, or if a telephone conference would otherwise be helpful, please call the undersigned at 617/542-5070.

Kindly acknowledge receipt of this application by returning the enclosed postcard.

Please send all correspondence to:

John C. Phillips  
Fish & Richardson P.C.  
601 Thirteenth Street, NW  
Washington, DC 20005

Respectfully submitted,



Robert A. Greenberg  
Reg. No. P-44,133  
Enclosures

**APPLICATION**  
**FOR**  
**UNITED STATES LETTERS PATENT**

**TITLE: DELIVERING ELECTRONIC CONTENT**

**APPLICANT: PATRICK E. PATTERSON**

"EXPRESS MAIL" Mailing Label Number EMS29183811US

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Lisa G. Gray



## DELIVERING ELECTRONIC CONTENT

### Technical Field

5           This invention relates to delivering electronic content.

### Background

10           The Internet offers a tremendous amount of information on a wide range of subjects. Many businesses and organizations offer world-wide-web sites that promote products, offer technical assistance, and provide other useful information. Search engines (e.g., Yahoo™) typically can provide lengthy lists of sites related to any topic of interest. Users typically do not want to take the time to  
15           investigate more than a handful of these sites. As a result, the vast number of web-sites makes it difficult for web-site providers to lure Internet users to their respective sites.

20           Since the inception of the web, web-pages have featured links to other sites. A link can appear as underlined text (e.g., "please visit deskgate"), as a picture, or as a sequence of images. Each link has an associated URL (universal resource locator) that identifies a web-site. For example, the URL associated with the  
25           deskgate link is <http://www.deskgate.com>. A link can be programmed to transport a user to a link's associated URL when a user selects the link (e.g., by clicking a mouse button).

30           To attract users to a site, some businesses rent space on other web-pages. For example, as shown in FIG. 1, a newspaper web-page 100 includes a variety of links to other sites. As shown, the web-page includes a banner 102 (i.e., a picture link in the shape of a banner) linked to a

resort's web-site. By selecting the link, the user is transported to the resort's web-page as shown in FIG. 2.

### Summary

5 In general, in one aspect, a method of delivering electronic content includes providing instructions that cause a first computer to collect information including an e-mail address, and transmitting the collected information to a second computer. The second computer processes the transmitted information by selecting electronic content for  
10 transmission to the e-mail address and e-mailing the selected electronic content.

Embodiments may include one or more of the following. The instructions can be web-page instructions such as HTML. The instructions can be of a form. The  
15 instructions can collect the information by querying the computer or by receiving user input. The information can include demographic information and/or system information.

The processing can be done by a program such as a script (e.g., a CGI script). A URL (universal resource  
20 locator) displayed at a browser using the instructions may not be altered by the transmitting of the collected information. The processing can select electronic content based on the transmitted information. The electronic content can include text, graphics, audio, video and/or  
25 executable instructions.

The information transmitted can include identification of the instructions that transmitted the information and/or identification of a site that transmitted the information.

30 In general, in another aspect, a method of delivering electronic content includes providing web-page form instructions that cause a first computer to

interactively collect an e-mail address from a user and transmit information including the collected address information to a second computer. The method further includes processing the transmitted information at the  
5 second computer by using the transmitted information to select electronic content and e-mailing the selected electronic content to the transmitted e-mail address.

In general, in another aspect, a method of delivering electronic content includes storing electronic  
10 content corresponding to different sets of instructions, receiving a request for electronic content produced by one of the sets of instructions, the request including an e-mail address, and selecting electronic content from the stored electronic  
15 content based on the received request. The selected electronic content is transmitted to the e-mail address included in the request.

In general, in another aspect, a computer-implemented method of providing access to electronic content  
20 includes displaying in a browser a web-page that includes a link corresponding to electronic content and in response to a user's selection of the link, collecting information without modifying the web-page displayed in the browser. The  
25 collected information is transmitted to a remote server, and electronic content from the remote server is sent to the e-mail address based on the collected information.

In general, in another aspect, a computer program, disposed on a computer readable medium, includes  
30 instructions for causing a first computer's processor to receive information collected by instructions at a second computer, and based on the received information, select

electronic content and transmit the electronic content to an e-mail address included in the received information.

Advantages may include one or more of the following. By linking an e-mail based electronic content delivery  
5 system to a web-page, businesses can enjoy the benefits of reaching "web-surfers" without the cost and/or computer resources needed to maintain a web-site. Linking in this manner also provides Internet users with the ability to get more information about a topic without leaving a web-page  
10 and without waiting for graphics and other information to be transmitted to their browser. A business providing electronic content can not only can receive demographic data describing interested users, but also can determine which web-pages are most effective in producing requests for  
15 information.

Other advantages of the invention will become apparent in view of the following description, including the figures, and the claims.

#### Drawing Descriptions

20 FIG. 1 is a screenshot of web-page that includes a banner.

FIG. 2 is a screenshot of a web-page reached via the banner of FIG. 1.

25 FIG. 3 is a screenshot of a web-page that includes a link.

FIG. 4 is a screenshot of a submission confirmation window.

FIG. 5 is a screenshot of an e-mail message including electronic content.

30 FIG. 6 is a listing of web-page instructions.

FIGS. 7A-7C are diagrams illustrating delivery of electronic content.

FIG. 8 is a flow chart of distribution software.

FIG. 9 is a diagram of a computer.

#### Detailed Description

Referring to FIG. 3, a web-page 104 viewed by a  
5 network browser (e.g., Netscape™ Navigator) uses text and  
graphics to present information to a user. As shown, the  
text and graphics include information related to a business  
enterprise. The web-page 104 also includes a form 106 that  
10 accepts user input. As shown, the form 106 includes a text  
entry control 108, and a submit button 110. The form 106  
also provides a graphic image 112 designed to attract  
attention. As shown, the form assumes the shape  
traditionally associated with banner-links (e.g., a bordered  
15 rectangle) but other shapes or formats could be used. The  
banner shape can communicate to a user that the form 106 is  
associated with a web-site other than the site the user is  
currently visiting. The form 106 can include other user  
input controls (not shown), for example, checkboxes that  
20 identify different areas of interest (e.g., "send me  
information on golf clubs" and "send me information on golf  
vacations").

Unlike a conventional banner-link, interaction with  
the form 106 does not transport the user to a different web-  
site. Instead, submitting entered information into the form  
25 (e.g., by typing information into the text box and then  
clicking the submit button 110) transmits the information  
entered by the user to a remote web-server without changing  
the current URL being displayed by the browser. The remote  
web-server uses the transmitted information to select and  
30 deliver electronic content (e.g., text, graphics, audio,  
video, and executable instructions) via e-mail. Co-pending  
U.S. Patent Application Serial Number \_\_\_\_\_, titled



"Tracking Electronic Content", and filed November 24, 1998, describes an electronic content delivery system, and is incorporated by reference.

Referring to FIG. 4, as shown, a user has entered an  
5 network e-mail address into the text field 108 and clicked the submit button 110. This action initiates transmission of the entered information to the remote web-server. After submitting the information, a window 114 appears informing a user that the information has been transmitted. The  
10 feedback provided by the window 114 prevents users from making repeated submissions in the mistaken belief their request failed.

FIG. 5 shows the interface for an e-mail client. After the remote web-server has received the transmitted  
15 information, it selects the appropriate electronic content and e-mails the selected electronic content to the specified e-mail address. The requestor then can view or otherwise access the delivered content using the e-mail client. As shown, the electronic content may be transmitted as an e-  
20 mail attachment 120. By delivering electronic content via e-mail, users can request information without interrupting their use of a currently displayed web-page 104 and without waiting for a linked site's web-page to load. Additionally, a business can deliver the content to an Internet user  
25 without the cost and expense of maintaining a web-site or reserving an Internet address.

Referring to FIG. 6, a network browser constructs a web-page's appearance from web-page instructions 104. These instructions 104 can be expressed in HTML (Hypertext Markup  
30 Language), Java, or other formats. When a user visits a web-page, the instructions 104 for the page are transmitted to the user's computer for processing by the user's browser. The instructions 104 describe the appearance and behavior of

web-page elements. For example, the instructions describe the form 106, the graphic image 112, the text control 108, and submit button 110. The instructions 104 include instructions 120 for transmitting collected information to the remote web-server for processing. As shown, the instructions 106 identify a program 122 at a remote web-server and specify values for different parameters 124a-124c. The remote server program processes the parameters to select electronic content to deliver to a specified e-mail address 108. As shown, the program is a CGI (Common Gateway Interface) script, however, programs written in other programming languages can also process the collected information (e.g., a Perl script or a Java or C++ program).

As shown, the instructions 106 transmit the e-mail address 124c interactively collected from a user and an identification of the electronic content 124b to deliver to the e-mail address specified 124c. Instead of hard-coding the content to deliver 124b, the instructions 120 can transmit an I.D. that identifies electronic content to transmit. For example, different I.D.s can be assigned to different sets of instructions 120. That is, an I.D. for the golf promotion form may be "001" while the I.D. for a car promotion form may be "002". Though the same instructions 120 can be incorporated into different web-pages, the remote server can use the I.D. to select the electronic content to transmit (e.g., information on the golf or car promotion). By using an I.D. instead of hard-coding a reference to electronic content, electronic content transmitted to a user can be easily altered.

The instructions 106 can be copied 106 into different web-pages to reach more web users. To identify the site that produced a request for electronic content, the instructions 106 can transmit a site identification token

124a of the site transmitting the information. This information can be hard-coded (as shown) or dynamically determined by interacting with a browser's API (Application Programming Interface). By transmitting the site token  
5 124a, the remote web-server can identify which web-pages produced the most number of requests for content.

The instructions 106 can be configured to interactively collect a wide variety of information from a user in addition to an e-mail address. Such information can  
10 include demographic information (e.g., name, address, and age) or information describing a user's interests. The electronic content transmitted by the remote server can be selected based on this information.

Additionally, the instructions 106 can dynamically  
15 access a body of information stored, for example, on the user's computer, and then transmit that information to the remote web-server. For example, the instructions can access a Windows™ registry on the user's computer to collect user and system information relating to the computer executing  
20 the instructions.

Though the instructions 106 shown produce a form, the instructions 106 that collect an e-mail message by querying a user's computer (e.g., by accessing the Windows™ registry) could instead present a simple picture or text  
25 (e.g., "Click here for e-mail information on golf"). When a user clicks on the picture or text, the instructions 106 dynamically collect the user's e-mail address and other information from the system and transmit the collected information to the remote server without requiring any data  
30 entry by the user.

Referring to FIG. 7A-7C, a remote web-server 132 delivers electronic content 138 based on a user's interaction with a web-page 104. As shown in FIG. 7A, a

user's computer 126 runs browser software 128. When the user navigates (e.g, by following a link or entering a URL) to a web-site, the web server 130 for that web-site transmits web-page instructions 104 to the user's computer

5 126. The user's browser 126 processes the web-page instructions 104 for display (as shown in FIG. 3).

Referring to FIG. 7B, the web-page 104 includes instructions 106 for collecting and transmitting information to the remote server 132. When a user submits a request for

10 electronic content (e.g., clicking the submit button 110), the information 124 collected from a user and/or system is transmitted to the remote web-server 132. As described above, the information 124 includes an e-mail address and can include other information such as an I.D. and/or the

15 address of the site 126 producing the request 124.

Referring to FIG. 7C, the remote web-server 132 includes a program 134 for processing the transmitted information 124. The program 134 can be a CGI script or alternatively a Perl, Java, or C++ program. The remote web-

20 server also stores electronic content 138 for transmission to a requesting user. The remote web-server 132 also may include a table 136 that stores the electronic content 138 that should be sent in response to an I.D. included received information. The remote web-server 132 selects and

25 transmits the electronic content 138a via e-mail to the e-mail address specified in the received information 124.

The remote web-server 132 produces reports based on requests that indicate which addresses received content, which web-pages produced content requests, and demographic

30 information describing the user's requesting information. Thus, businesses can closely track their efforts at reaching users.

The remote web-server 132 can store electronic content 138 corresponding to any number of different sets of instructions 106 (e.g., different forms). Thus, a single web-server 132 can provide electronic content delivery for a large number of different businesses or organizations. Processing requests for content typically consumes considerable computational resources on the processing computer. In addition, storing the content 138 typically requires a large volume of non-volatile storage. By letting a remote web-server dedicated to processing requests handle delivery and storage of content, the computers associated with the various enterprises will not be slowed or otherwise burdened by the processing of requests during business hours.

Referring to FIG. 8, the program 134 running on the remote web-server 132 processes information to select and e-mail electronic content to a specified e-mail address. After receiving a request for electronic content (140), the program 134 may repress transmission of information to a user's browser (e.g., for example by issuing an "echo status: 202 No Response" command). This command prevents a user's display from being altered.

The program 134 can use the I.D. to determine which electronic content to send to a specified address (142). The program 134 can also analyze demographic data included in the received information 124 to select electronic content for delivery. After selecting the electronic content, the program 134 can e-mail the determined content (144) to the e-mail address specified in the request 124.

Referring to FIG. 9, a computer platform 146 includes a monitor 148, input devices such as a keyboard 150 and mouse 151, and a digital computer 152. The digital computer 152 includes memory 154, a processor 156, a mass

storage device 164a (e.g., a hard disk) and a network connection 160 for transmitting and receiving data. The mass storage device 164a includes instructions for an operating system 162 (e.g., Windows™ 98), distribution software 134, and electronic content 138. These instructions can be stored in other computer readable mediums such as a floppy disk 164b, a CD-ROM drive 164c, or other hardware such as an EPROM 164d. In the course of operation, the stored instructions are transferred to memory 154 and the processor 156 for execution.

The techniques described here are not limited to any particular hardware or software configuration. The techniques may be implemented in hardware or software, or a combination of the two. Preferably, the techniques are implemented in computer programs executing on programmable computers that each include a processor, a storage medium readable by the processor (including volatile and non-volatile memory and/or storage elements), at least one input device, and one or more output devices. Program code is applied to data entered using the input device to perform the functions described and to generate output information. The output information is applied to one or more output devices.

Each program is preferably implemented in a high level procedural or object oriented programming language to communicate with a computer system. however, the programs can be implemented in assembly or machine language, if desired. In any case, the language may be a compiled or interpreted language.

Each such computer program is preferably stored on a storage medium or device (e.g., CD-ROM, hard disk or magnetic diskette) that is readable by a general or special purpose programmable computer for configuring and operating

the computer when the storage medium or device is read by the computer to perform the procedures described in this document. The system may also be considered to be implemented as a computer-readable storage medium,

- 5 configured with a computer program, where the storage medium so configured causes a computer to operate in a specific and predefined manner.

Other embodiments are within the scope of the following claims.

- 10 What is claimed is:

1           1. A method of delivering electronic content,  
2 comprising:  
3           providing instructions that cause a first computer  
4 to collect information including an e-mail address, and  
5 transmit the collected information to a second computer; and  
6           processing the transmitted information at the second  
7 computer by selecting electronic content for transmission to  
8 the e-mail address and e-mailing the selected electronic  
9 content.

1           2. The method of claim 1, wherein providing  
2 instructions comprises providing web-page instructions.

1           3. The method of claim 2, wherein web-page  
2 instructions comprise HTML instructions.

1           4. The method of claim 2, wherein the instructions  
2 comprise form instructions.

1           5. The method of claim 1, wherein the instructions  
2 that cause the first computer to collect information  
3 comprise instructions that query the first computer for  
4 information.

1           6. The method of claim 1, wherein the instructions  
2 that cause the first computer to collect information  
3 comprise instructions that receive user input.

1           7. The method of claim 1, wherein the information  
2 comprises demographic information.

1           8. The method of claim 1, wherein the information  
2 comprises system information.



1           9. The method of claim 1, wherein processing the  
2 information comprises executing a script.

1           10. The method of claim 8, wherein the script  
2 comprises a Common Gateway Interface script.

1           11. The method of claim 1, wherein the instructions  
2 remain present at the first computer during the processing.

1           12. The method of claim 1, wherein the electronic  
2 content comprises text.

1           13. The method of claim 1, wherein the electronic  
2 content comprises graphics.

1           14. The method of claim 1, wherein the electronic  
2 content comprises video information.

1           15. The method of claim 1, wherein the electronic  
2 content comprises audio information.

1           16. The method of claim 1, wherein the electronic  
2 content comprises executable instructions.

1           17. The method of claim 1, wherein selecting  
2 electronic content comprises selecting electronic content  
3 based on the transmitted information.

1           18. The method of claim 1, wherein the information  
2 comprises identification of the instructions that  
3 transmitted the information.

1           19. The method of claim 1, wherein the information  
2 comprises identification of a computer that transmitted the  
3 information.

1           20. A method of delivering electronic content, ✓  
2 comprising:

3           providing web-page form instructions that cause a  
4 first computer to interactively collect an e-mail address  
5 from a user and transmit information including the collected  
6 address information to a second computer; and

7           processing the transmitted information at the second  
8 computer by using the transmitted information to select  
9 electronic content and e-mailing the selected electronic  
10 content to the collected e-mail address.

1           21. A computer-implemented method of providing ✓  
2 access to electronic content, comprising:

3           displaying in a browser a web-page that includes a  
4 link corresponding to electronic content;

5           in response to a user's selection of the link,  
6 collecting information without modifying the web-page  
7 displayed in the browser, the collected information  
8 including an e-mail address;

9           transmitting the collected information to a remote  
10 server; and

11          sending electronic content from the remote server to  
12 the e-mail address based on the collected information.

1           22. A computer program, disposed on a computer ✓  
2 readable medium, the computer program including instructions  
3 for causing a first computer's processor to:

4           receive information collected by instructions at a  
5   second computer, the information including an e-mail  
6   address; and  
7           based on the received information, select electronic  
8   content, and transmit the selected electronic content to the  
9   e-mail address included in the received information.

1           23. The computer program of claim 22, wherein the  
2   instructions that cause the processor to select electronic  
3   content comprise instructions that cause the processor to  
4   use a table that indicates electronic content corresponding  
5   to data included in the received information.

## DELIVERING ELECTRONIC CONTENT

### Abstract

Delivering electronic content includes providing instructions that cause a computer to collect information including an e-mail address and transmitting the collected information to a receiving computer. The computer that receives the transmitted information selects electronic content based on the received information and e-mails the selected electronic content to the e-mail address included in the received information.

349418.B11

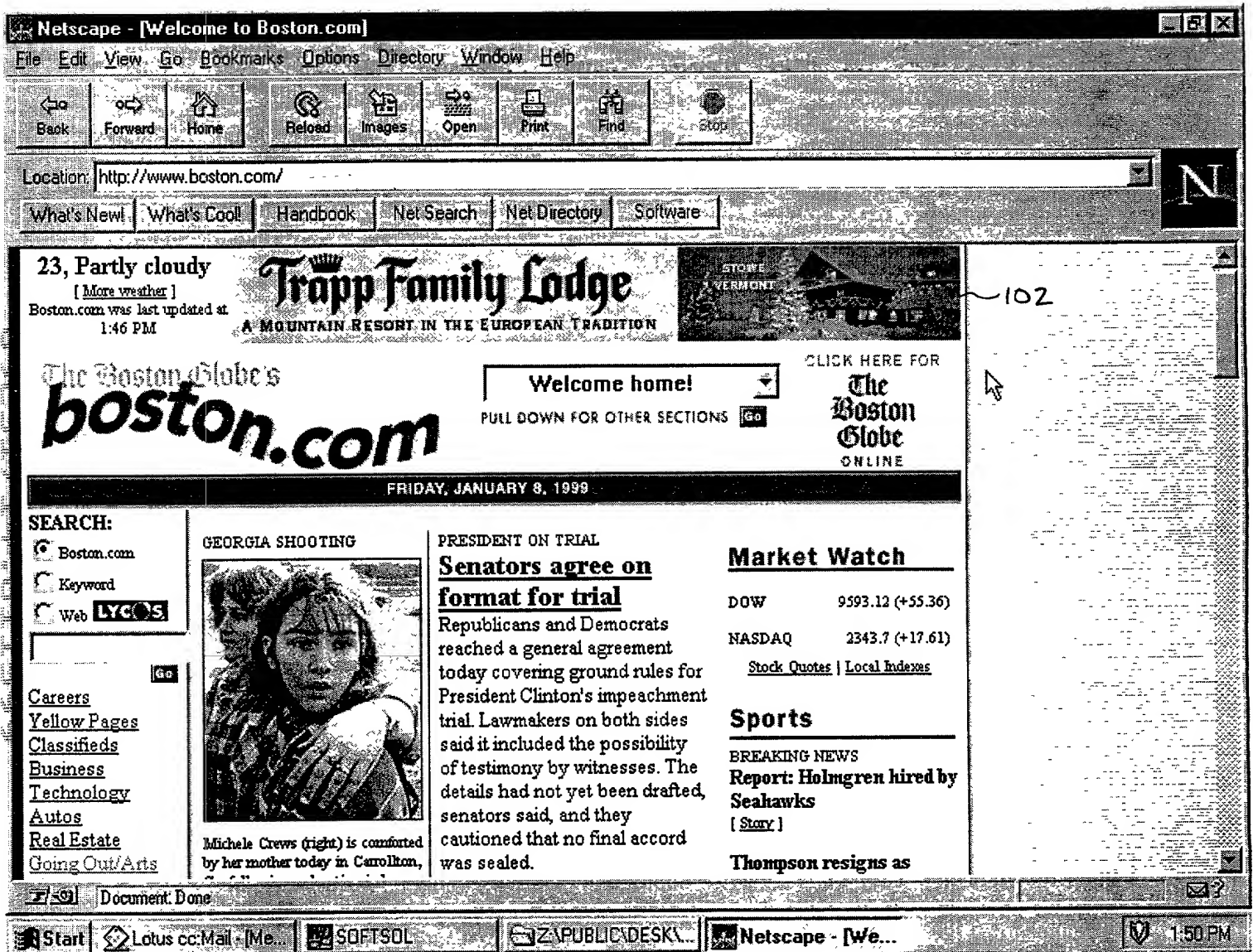


FIG. 1



FIG. 2

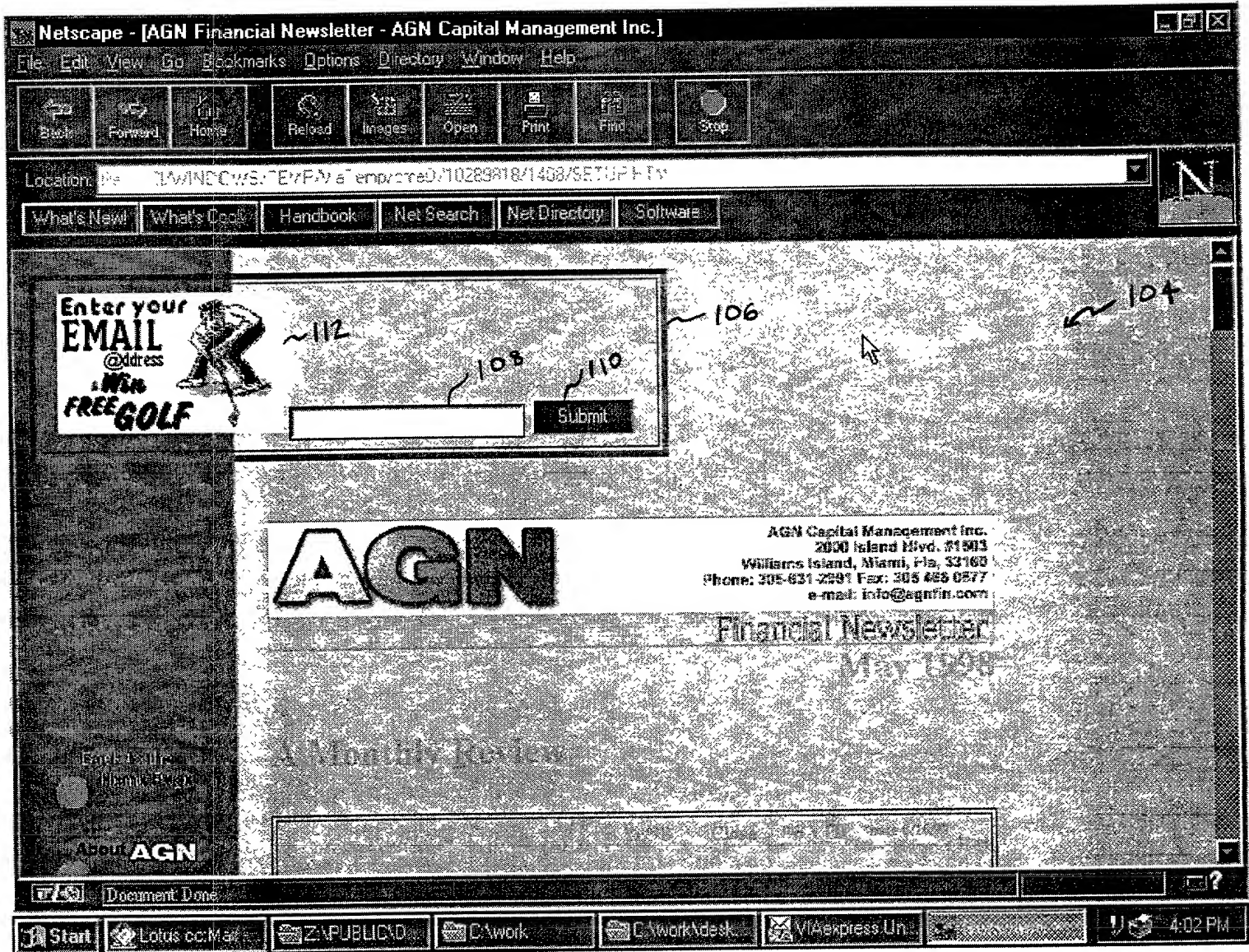


FIG. 3



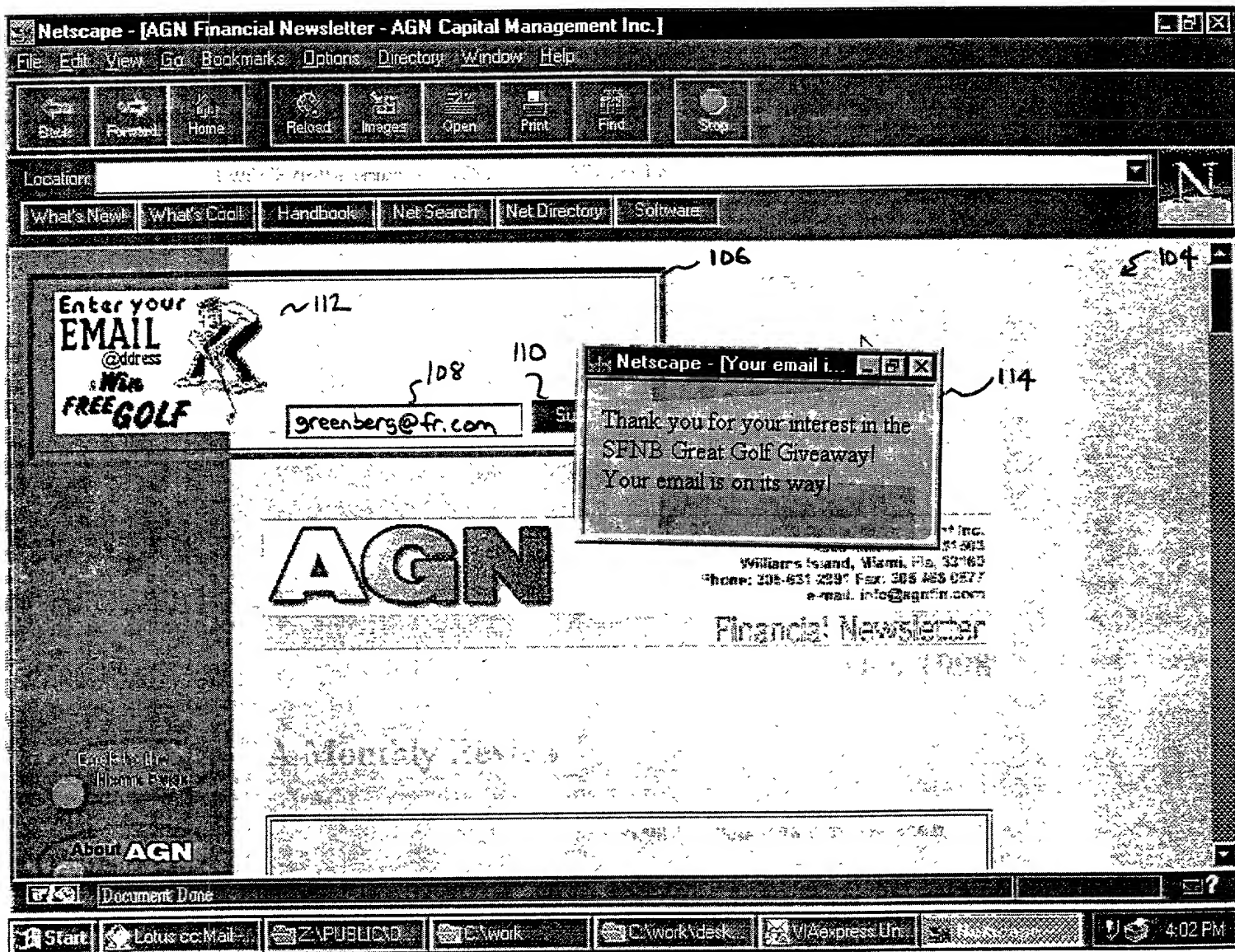


FIG. 4



5116

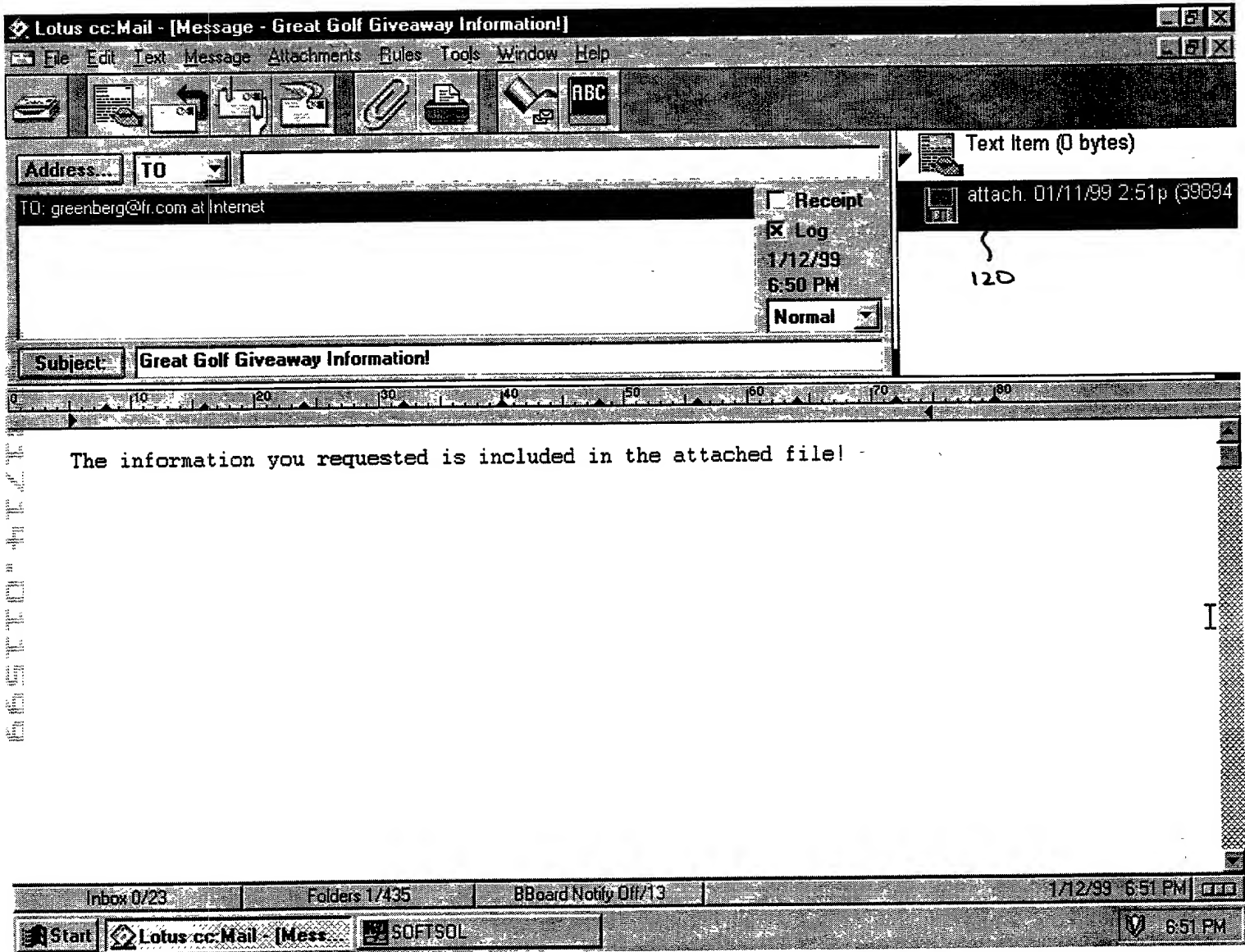


FIG. 5

104

106

FIG. 6

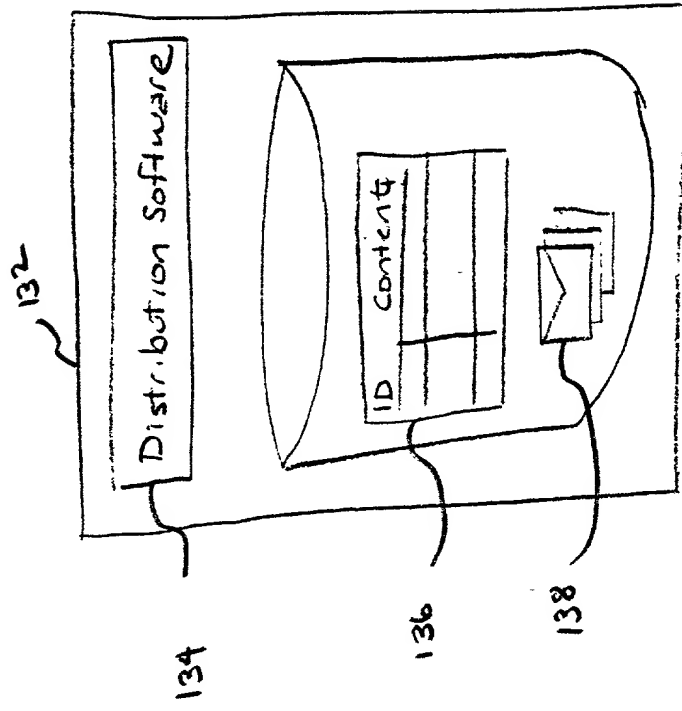
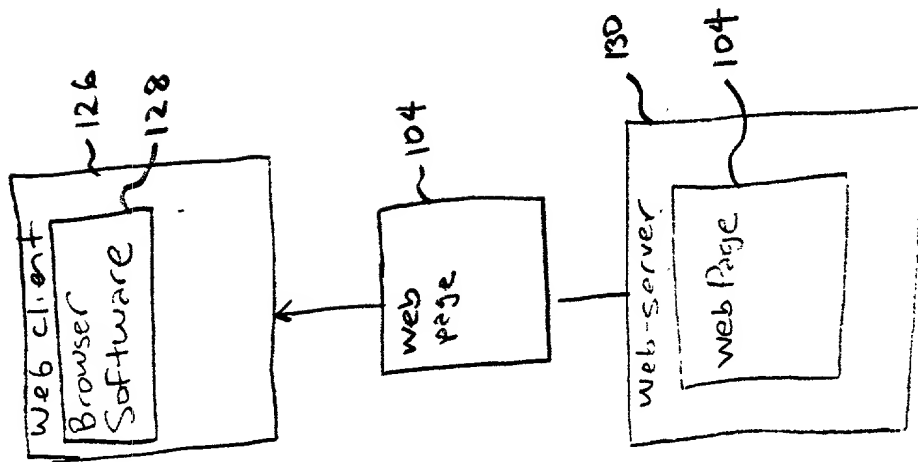


FIG. 7A

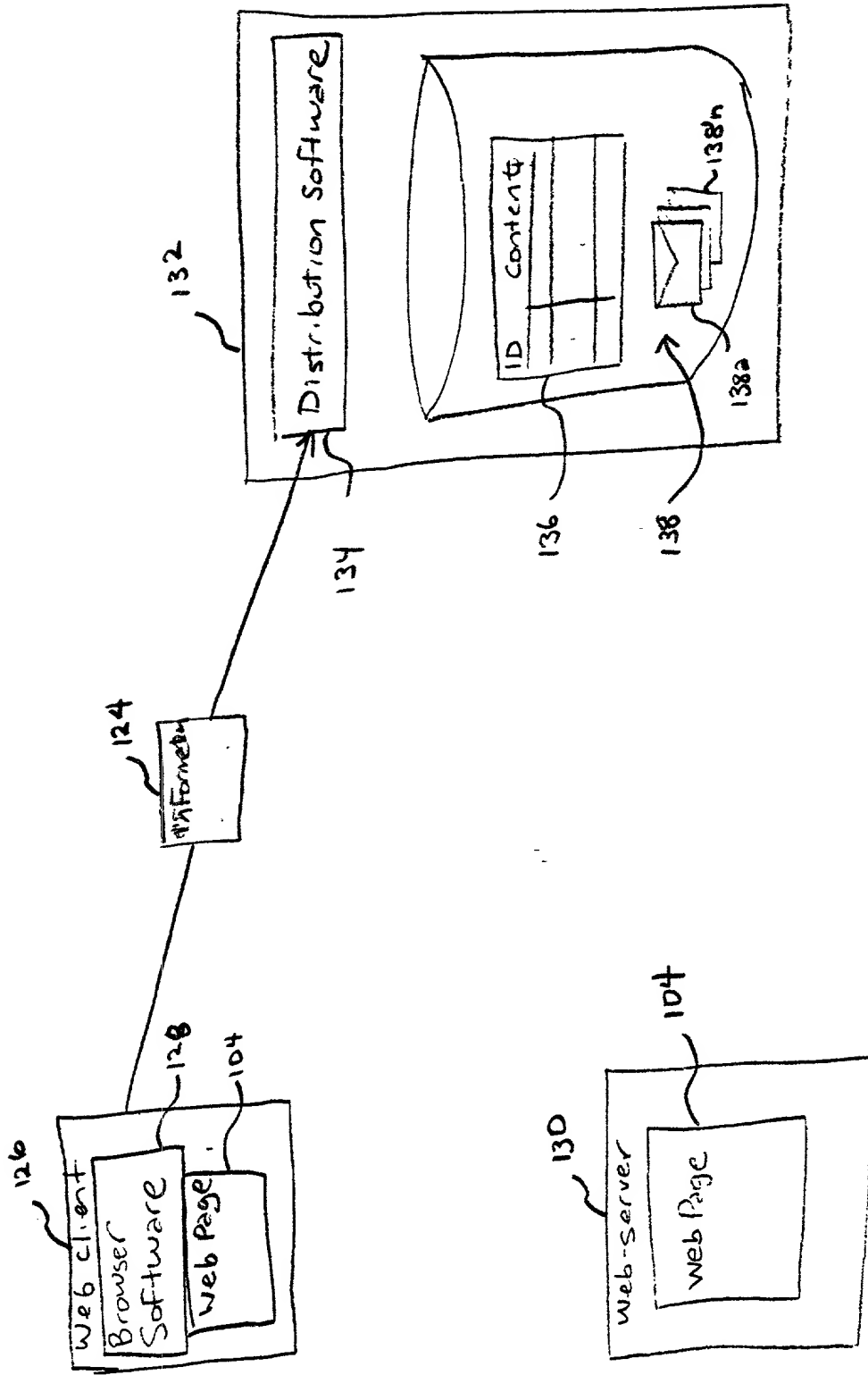


FIG. 7B

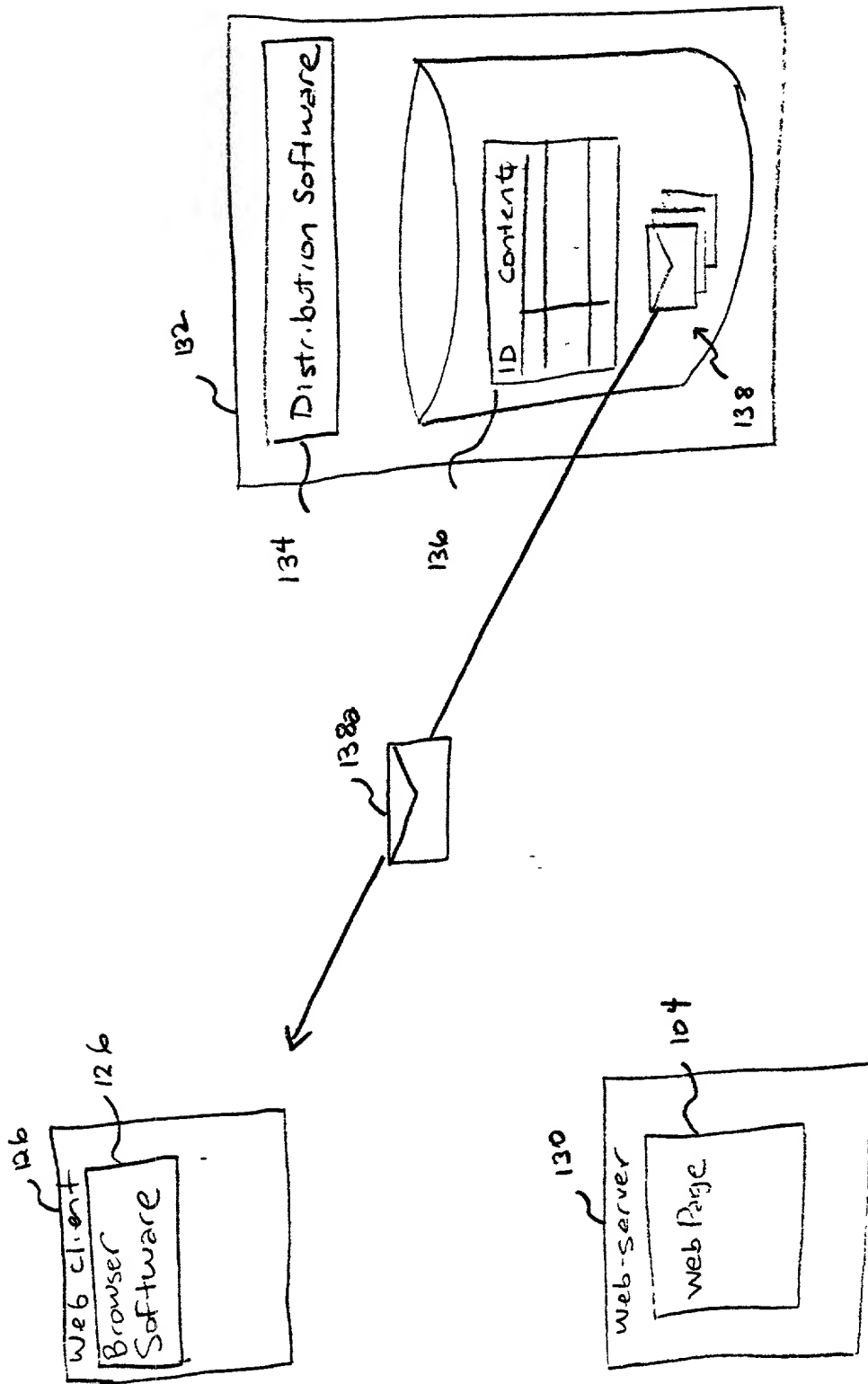


FIG. 7C

134

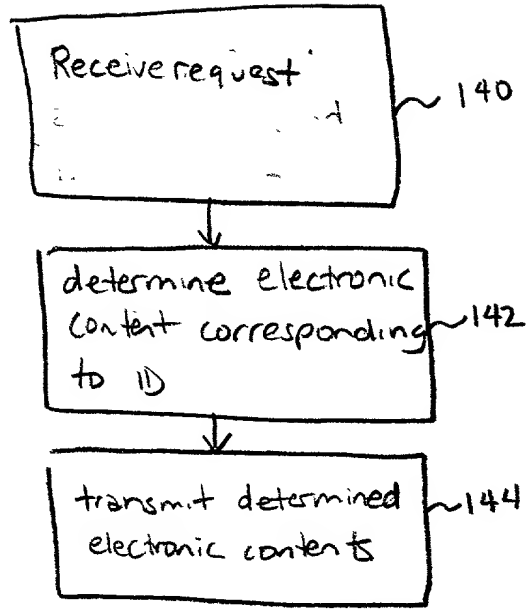
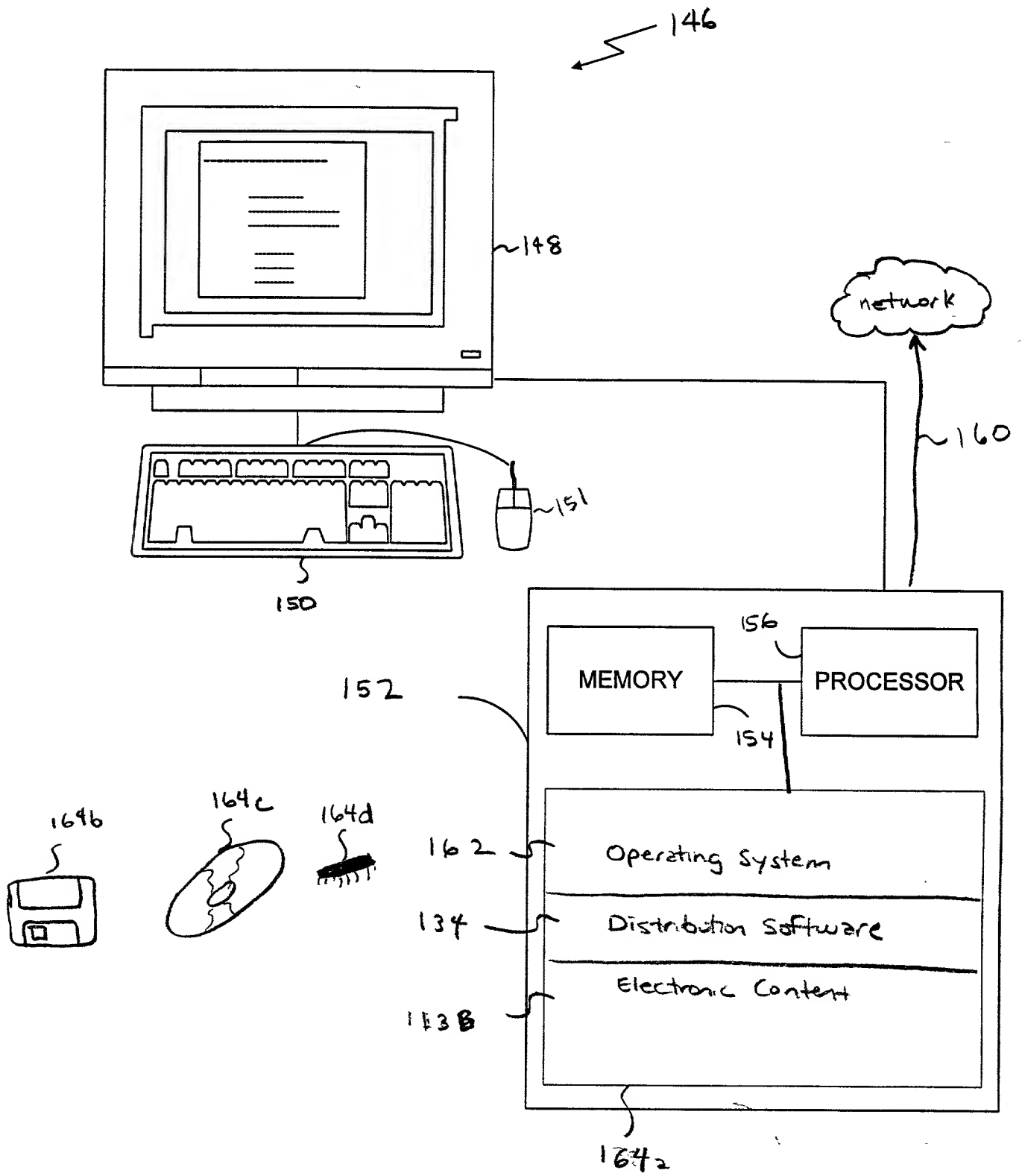


FIG. 8

FIG. 9



COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled DELIVERING ELECTRONIC CONTENT, the specification of which ☒ is attached hereto.

☐ was filed on \_\_\_\_\_ as Application Serial No. \_\_\_\_\_ and was amended on \_\_\_\_\_.

☐ was described and claimed in PCT International Application No. \_\_\_\_\_ filed on \_\_\_\_\_ and as amended under PCT Article 19 on \_\_\_\_\_.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose all information I know to be material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56.

I hereby appoint the following attorneys and/or agents to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: John C. Phillips, Reg. No. 35,322; Richard J. Anderson, Reg. No. 36,732; Steve J. Shumaker, Reg. No. 36,275; John F. Hayden, Reg. No. 37,640; David L. Feigenbaum, Reg. No. 30,378; and Robert A. Greenberg, Reg. No. P-44,133.

Address all telephone calls to John C. Phillips at telephone number 202/783-5070.

Address all correspondence to John C. Phillips, Fish & Richardson P.C., 601 Thirteenth Street, NW, Washington, DC 20005.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Full Name of Inventor: Patrick E. Patterson

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Residence Address: Arlington, VA

Citizen of: USA

Post Office Address: 1027 South 26th Street, Arlington, VA 22202